

LJMU Research Online

Brown, W and Palasinski, M

Examining the dark tetrad and its links to cyberbullying

<http://researchonline.ljmu.ac.uk/id/eprint/11059/>

Article

Citation (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

Brown, W and Palasinski, M (2019) Examining the dark tetrad and its links to cyberbullying. *CyberPsychology, Behavior and Social Networking*, 22 (8). ISSN 1094-9313

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact researchonline@ljmu.ac.uk

Examining the dark tetrad and its links to cyberbullying

Abstract

Cyberbullying is a growing problem in the fast-evolving world of social media. Although this problem has been studied extensively, there is relatively little research examining it from the angle of the dark tetrad (i.e., Psychopathy, Machiavellianism, Sadism and Narcissism), especially across different ethnicities. In other words, this research makes original contribution by exploring the predictive ability of the dark tetrad traits in individuals of different ethnicities and their subsequent willingness to engage in cyberbullying. *The study (N=1464)* explores whether there is a positive association between the dark tetrad personality traits and cyberbullying. The results reveal that all four traits predict cyberbullying in participants from across three different ethnicities (Asian, Black and White). Furthermore, female participants score less than their male counterparts across all four traits. Researchers, academics and legislators might potentially benefit from this research by considering focusing their interventions on helping offenders minimize the display of certain personality traits, thus taking steps towards cyberbullying reduction.

Keywords: Dark tetrad; correlation; cyberbullying,

Examining the dark tetrad and its links to cyberbullying

Traditionally, the dark triad consists of three malevolent personality traits which includes; narcissism, psychopathy and Machiavellianism¹. However, in recent years sadism has also been incorporated into the dark triad to form the dark tetrad² due to the similarities with the other three personality traits^{3 4}.

Aggressive behavior is reportedly interlinked with narcissistic personality⁵. More specifically, narcissism can be categorized into two types: grandiose (i.e., an unrealistic sense of superiority) and vulnerable (i.e., a constant victimisation mentality requiring sympathetic attention), which are alternately dominant. Each type of narcissism predicts different types of violence, the former being more active denigration of others, and the latter being a form of apparent self-belittlement at the emotional cost of others (Afek, 2018). It was also found that cyber-aggression had a positive correlation to narcissism⁶. This is believed to be a defence mechanism against low self-esteem⁵. In addition to this, individuals experiencing social media addiction are more likely to score higher in narcissism⁷. Other research^{8 9} have revealed narcissism not be a strong predictor of cyberbullying. For example, only covert (i.e., less directly expressed), not overt (i.e., more directly expressed) form of narcissism was found to predict cyberbullying (Field, 2018).

It must be mentioned that deviant and risky behaviors were originally explained by Problem Behavior Theory (Boyd, Young, Grey, & McCabe, 2009; Jessor, 1987, 1991), its relevant essence here being that engaging in one form of cyberbullying increases the likelihood of engaging in another form of cyberbullying. Offline psychopathy can be amplified online; they also make better use of social media by engaging in severer antisocial behaviors⁴ to satisfy their predatory desires without considering the wellbeing of other users¹⁰. Psychopathic individuals are manipulative, pathological liars and use

superficial charm to attract victims¹¹ both in the virtual and in the offline world. Results from previous research reported that psychopathy was a strong predictor of cyberbullying^{5 12}.

Similarly, to narcissism, Machiavellians are selective when posting online, this is to promote their perfect-self on social media to gain trust of other users¹³, which is consistent with other related research^{14 9}.

Sadism is a newly proposed trait in the dark triad which has now evolved into the dark tetrad, as it shared many similarities with psychopathic, narcissistic, Machiavellian traits^{3 15}. Those scoring high on Sadism are described as experiencing joy of others pain¹⁶, having predatory tendencies and desire for power¹⁷. “Everyday sadism” was also the only dark personality trait linked with immense time and energy spent committing hostile actions against innocent individuals^{2 18}.

In more recent research (Kircaburun, Jonason, Griffiths, 2018), , it was shown that whereas cyberbullying and cyberstalking fully mediated the relationship between Machiavellianism and problematic social media use (PSMU) in the total sample of men and women (total sample) and men alone, narcissism was indirectly associated with PSMU via cyberstalking in the total sample and among women. In the same research, it was also found that association between sadism and problematic social could be well explained by cyberbullying and cyberstalking in the total sample, and that even though cybertrolling was not associated with PSMU, it was associated with sadism, psychopathy, and Machiavellianism, although it was not related to PSMU.

The aim of this present research project is to take into account quite neglected ethnicity (potentially implying diverse cultural values) and investigate whether there is a predictive link between dark tetrad personality traits and subsequent tendency to engage in cyberbullying. Thus, although there is already substantial research on the relationship between personality and PSMU (Kuss & Griffiths, 2011), in this this paper we answer the call for neglected research on the Dark Triad in cyberspace (Kircaburun, Demetrovics, & Tosuntaş, 2018)

Based on previous research^{4 9}, it was hypothesized (H1) that sadism, Machiavellianism and psychopathy (but not narcissism) would be positively correlated with cyberbullying.

While previous studies have established a link between cyberbullying and ethnicity^{19 20 21 22}, there is a current lack of literature focusing on the role that ethnicity in mediating the relationship between cyberbullying and dark tetrad traits. Therefore, it was also hypothesized (H2) that ethnicity would be a moderating variable expected to influence the strength of correlation between dark tetrad scores and cyberbullying outcome.

2. Method

2.1. Design

The current study followed a correlational design using standard multiple regression, the predictor variables being personality types as determined by the dark tetrad characteristics, and the outcome variable being measured by scores on the cyberbullying scales described below.

Participants

Participants (Age: $M = 22.48$, $SD = 5.95$ years) were recruited through social media to maximise their diversity. Twitter was used to spread the study due to its popularity among young adults. Initially, a sample size power analysis was performed by G*Power which established that 260 male participants and 260 female participants were needed to reach a statistical significance with the five predictors (dark tetrad sub-scales and gender) of cyberbullying outcome variable with eighty percent of the time. However, once the survey was posted the number of participants exceeded the baseline required. Upon removal of repeat IP addresses, underage participants, unknown sex and ethnicities we had 1310 females and 790 males.

2.2. Materials

2.2.1. The Dark Tetrad Personality traits

The dark triad²³ was used to measure each participant's personality. The test comprises of 27 items that assess the three recognised personality traits (each trait consists of 9 items); Psychopathy, Narcissism and Machiavellianism. A five-point Likert rating scale is used which ranges from 'disagree strongly' to 'agree strongly'. Moreover, an additional measure 'Sadism' was included due to its similarities with the other three traits of dark triad. With the inclusion of the Short Sadistic Impulse Scale (SSIS)²⁴, which has a further total of 10 items, evolved into the 'dark tetrad'⁴. A few examples of Machiavellianism, Narcissism, Psychopathy and Sadism are: 6. *you should wait for the right time to get back at people*, 7. *have been compared to famous people*, 6. *People who mess with me always regret it*, 9. *I have fantasies which involve hurting people*. The Cronbach's alpha value = .88.

2.2.2. Cyberbullying Perpetration Scale

The sub-scale "Social exclusion perpetration" of Cyberbullying Perpetration (CBP)²⁵ constitutes 6 items, using the 5-point Likert-type response scale; its Cronbach's alpha value is .93. The scale featured the following items: *I have blocked someone in a chat room to harm the person*; *I have blocked someone on an instant messenger to upset the person*; *I have rejected someone's request playing online games together to harm the person*; *I have excluded someone from online community groups to make them feel left out*; *I have never excluded someone from online group activities to make them feel left out*; *I have ignored someone's comments on social community online to embarrass the person*.

2.2.3. Global Assessment of Internet Trolling

The Global Assessment of Internet Trolling (GAIT)⁴ was also used in this current study. This measure consists of 4 items. The Cronbach's alpha value is .82, which demonstrated fine internal consistency. The scale featured the following items: *I have sent people to shock websites for the lulz*; *I like to troll people in forums or the comments section of websites*; *I enjoy griefing other players in multiplayer games*; *The more beautiful and pure a thing is, the more satisfying it is to corrupt*.

2.3. Procedure

The electronic survey was advertised through Twitter and Instagram using Qualtrics. Tweets were posted describing the study and requesting for participants, those that volunteered had the option to click on the link which directed them to the questionnaire.

3. Results

3.1. Influence of dark tetrad sub-scales on cyberbullying by gender

Narcissism. Unexpectedly, results indicate that there are significant simple positive associations between mean narcissism scores and total cyberbullying scores (Male = $R^2 = .03$, $F(1, 788) = 24.40$, $p < .001$), (Female = $R^2 = .03$, $F(1, 1306) = 42.67$, $p < .001$), implying that higher levels of narcissism is a significant predictor of cyberbullying.

Machiavellianism. Results indicate that there is a significant positive association between Machiavellianism and cyberbullying scores (Male = $R^2 = .06$, $F(1, 789) = 52.93$, $p < .001$), (Female = $R^2 = .09$, $F(1, 1308) = 129.70$, $p < .001$), implying that higher levels of Machiavellianism is a significant predictor of cyberbullying. Thus, around 6.3% of the variation in cyberbullying scores could be accountable to Machiavellianism traits for male participants while approximately 9% of the variation could be accounted to Machiavellianism in females.

Psychopathy. Results indicate that there is a significant simple positive association between mean Psychopathy scores and mean cyberbullying scores (Male = $R^2 = .09$, $F(1, 789) = 73.00$, $p < .001$), (Female = $R^2 = .08$, $F(1, 1307) = 118.10$, $p < .001$), implying that higher levels of psychopathy is a significant predictor of cyberbullying.

Sadism. There was a significant (although weak) positive association between Psychopathy and cyberbullying scores in both sexes (Male = $R^2 = .03$, $F(1, 789) = 25.63$, $p < .001$) and (Female = $R^2 = .01$, $F(1, 1307) = 9.54$, $p = .002$).

3.2 Dark tetrad (overall scores) and unique predictors of cyberbullying

Results indicate that there is a significant simple positive association between overall mean dark tetrad scores and mean cyberbullying scores (Male = $R^2 = .08$, $F(1, 789) = 65.48$, $p < .001$), (Female = $R^2 = .05$, $F(1, 1308) = 63.99$, $p < .001$) implying that a mean combination of sadism, Machiavellianism, Narcissism, and Psychopathy traits are positive predictors of cyberbullying. Secondary analyses suggest Machiavellianism and psychopathy are independent positive predictors of cyberbullying in both sexes, whilst narcissism and sadism are not (see Table 1).

3.3 Ethnicity

Tables 2-4 indicate little ethnic variation amongst Dark Tetrad, its sub-scales and cyberbullying. Specifically, results for individuals who identified as 'White' as demonstrated in Table 2 shows that mean cyberbullying scores demonstrated weak to moderate positive correlations with other traits: narcissism (male $r = .25$, $p = .001$, $n = 294$; female $r = .16$, $p = .001$, $n = 371$), Machiavellianism (male $r = .24$, $p = .001$, $n = 294$; female $r = .28$, $p = .001$, $n = 371$), psychopathy (male $r = .34$, $p = .001$, $n = 294$; female $r = .29$, $p = .001$, $n = 371$) and sadism trait (male $r = .11$, $p = .051$, $n = 294$; female $r = .13$, $p = .01$, $n = 371$). Finally, a significant positive correlation was found between mean cyberbullying scores and mean dark triad scores (male $r = .25$, $p = .001$, $n = 294$; female $r = .24$, $p = .001$, $n = 371$).

Results for individuals who identified as 'Black' as demonstrated in Table 3 show that mean cyberbullying scores demonstrated weak to moderate positive correlations with other traits: narcissism (male $r = .25$, $p = .001$, $n = 90$; female $r = .30$, $p = .001$, $n = 350$), Machiavellianism (male $r = .24$, $p = .001$, $n = 90$; female $r = .28$, $p = .001$, $n = 350$), psychopathy (male $r = .48$, $p = .001$, $n = 90$; female $r = .37$, $p = .001$, $n = 350$) and sadism trait (male $r = .26$, $p = .003$, $n = 90$; female $r = .11$, $p = .01$, $n = 350$). Finally, a significant positive correlation was found between mean cyberbullying scores and mean dark triad scores (male $r = .40$, $p = .001$, $n = 90$; female $r = .24$, $p = .001$, $n = 350$).

Results for individuals who identified as 'Asian' as demonstrated in Table 4 show that mean cyberbullying scores demonstrated weak to moderate positive correlations with other traits: narcissism (male $r = .13$, $p = .02$, $n = 329$; female $r = .07$, $p = .13$, $n = 448$), Machiavellianism (male $r = .25$, $p = .001$,

$n = 329$; female $r = .34, p = .001, n = 448$), psychopathy (male $r = .22, p = .001, n = 329$; female $r = .37, p = .001, n = 448$) and sadism trait (male $r = .24, p = .01, n = 329$; female $r = .11, p = .01, n = 448$). Finally, a significant positive correlation was found between mean cyberbullying scores and mean dark triad scores (male $r = .30, p = .001, n = 329$; female $r = .27, p = .001, n = 448$).

4. Discussion

Our results are consistent with the findings from a related study⁵ showing that Dark Triad predicts cyberbullying. Our small associations between narcissism and cyberbullying are in line with other research showing that narcissism was also a predictor for cyberbullying tendencies¹². The significant positive correlation between psychopathy and cyberbullying tendency was found in both genders, which is consistent with previous research^{10 12 4 18}. Furthermore, related research investigating the link between dark triad personality trait and Twitter usage found that both Psychopathy and Machiavellianism were associated with the use of derogatory language including swear words and anger outbursts online²⁶. This may explain why individuals who score highly on Psychopathy predicted cyberbullying on Twitter due to psychopathy influencing their malicious interpersonal communications^{27 10}.

Our results also showed that Machiavellianism was a significant predictor for cyberbullying for both genders, even though male participants often score higher, which is in line with other past research^{7 12 26}. Consistent with previous work, the results found that sadism was (albeit weak) predictor of cyberbullying^{18 10}. It appears, then, that sadistic individuals might be stimulated by hurting others and seeing the victims suffer as they find it gratifying¹⁶, which becomes easier and anonymous in cyberspace.

The findings generalize across White, Black and Asian participations. This is surprising given cultural variation in personality and social behaviors, such as aggression^{28 29}. It was found, for example, that Asians are from a collective society dislike narcissistic individuals³⁰, which is in line with a more recent study²⁸ demonstrating that participants from Japan scored lower in cyberbullying and interdependent self-construal compared to participants from United States. Nonetheless, given the very

weak correlation, the ethnicity results should be treated with extra caution as they seem to require more clarification in further research.

To sum up, the first hypothesis was partially supported as all four of Dark Tetrad traits were predictors of cyberbullying. However, findings indicate that in our ethnically diverse sample, Machiavellianism and Psychopathy are better predictors of cyberbullying than Narcissism or Sadism. Surprising there was little gender or ethnic variation in the associations between the Dark Tetrad and cyberbullying. Since females have been found to experience more sexual harassment than men online ³¹, future work may reveal gender differences in the associations between Dark Tetrad scales and being a victim of cyberbullying.

Despite some weaknesses of this research associated with survey-based research, like the lack of control over confounding variables, 'demand characteristics' or measuring intention rather than actual behavior, the results tie up with and contribute to the previous research^{4 10}. In other words, the Dark Tetrad does appear to predict cyberbullying tendencies. The differences were small between ethnicities, which also seems consistent with past research^{19 32}. Future studies could perhaps focus on analysing the predictive ability of more culturally diverse samples to determine if some cultures are at greater risk of being a victim of cyberbullying. Such studies might also examine the mediating role of antisocial online behaviors between the Dark Tetrad and other types of social interaction in cyberspace.

References

- ¹ Paulhus DL, Williams KM. The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of research in personality*. 2002 Dec 1;37(6):556-63.
- ² Buckels EE, Jones DN, Paulhus DL. Behavioral confirmation of everyday sadism. *Psychological science*. 2013 Nov;24(11):2201-9.
- ³ Chabrol H, Van Leeuwen N, Rodgers R, Séjourné N. Contributions of psychopathic, narcissistic, Machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*. 2009 Nov 1;47(7):734-9.
- ⁴ Buckels EE, Trapnell PD, Paulhus DL. Trolls just want to have fun. *Personality and individual Differences*. 2014 Sep 1; 67:97-102.
- ⁵ Baughman HM, Dearing S, Giammarco E, Vernon PA. Relationships between bullying behaviours and the Dark Triad: A study with adults. *Personality and Individual Differences*. 2012 Apr 1;52(5):571-5.
- ⁶ Buffardi LE, Campbell WK. Narcissism and social networking web sites. *Personality and social psychology bulletin*. 2008 Oct;34(10):1303-14.
- ⁷ Andreassen CS, Pallesen S, Griffiths MD. The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive behaviors*. 2017 Jan 1;64:287-93.
- ⁸ Pabian S, De Backer CJ, Vandebosch H. Dark Triad personality traits and adolescent cyber-aggression. *Personality and Individual Differences*. 2015 Mar 1;75:41-6.
- ⁹ Kircaburun K, Demetrovics Z, Tosuntaş ŞB. Analyzing the links between problematic social media use, Dark Triad traits, and self-esteem. *International Journal of Mental Health and Addiction*. 2018:1-2.

- ¹⁰ Craker N, March E. The dark side of Facebook®: The Dark Tetrad, negative social potency, and trolling behaviours. *Personality and Individual Differences*. 2016 Nov 1;102:79-84.
- ¹¹ DeLisi M, Peters DJ, Dansby T, Vaughn MG, Shook JJ, Hochstetler A. Dynamics of psychopathy and moral disengagement in the etiology of crime. *Youth Violence and Juvenile Justice*. 2014 Oct;12(4):295-314.
- ¹² Goodboy AK, Martin MM. The personality profile of a cyberbully: Examining the Dark Triad. *Computers in Human Behavior*. 2015 Aug 1;49:1-4.
- ¹³ Abell L, Brewer G. Machiavellianism, self-monitoring, self-promotion and relational aggression on Facebook. *Computers in Human Behavior*. 2014 Jul 1;36:258-62.
- ¹⁴ Chabrol H, Bouvet R, Goutaudier N. The dark tetrad and antisocial behavior in a community sample of college students. *Journal of Forensic Psychology Research and Practice*. 2017 Oct 20;17(5):295-304.
- ¹⁵ Chabrol H, Melioli T, Van Leeuwen N, Rodgers R, Goutaudier N. The Dark Tetrad: Identifying personality profiles in high-school students. *Personality and Individual Differences*. 2015 Sep 1;83:97-101.
- ¹⁶ Greitemeyer T. Everyday sadism predicts violent video game preferences. *Personality and Individual Differences*. 2015 Mar 1;75:19-23.
- ¹⁷ Meere M, Egan V. Everyday sadism, the dark triad, personality, and disgust sensitivity. *Personality and Individual Differences*. 2017 Jul 1;112:157-61.
- ¹⁸ Sest N, March E. Constructing the cyber-troll: Psychopathy, sadism, and empathy. *Personality and Individual Differences*. 2017 Dec 1;119:69-72.

- ¹⁹ Brighi A, Guarini A, Melotti G, Galli S, Genta ML. Predictors of victimisation across direct bullying, indirect bullying and cyberbullying. Emotional and behavioural difficulties. 2012 Sep 1;17(3-4):375-88.
- ²⁰ Han Z, Fu M, Liu C, Guo J. Bullying and Suicidality in Urban Chinese Youth: The Role of Teacher–Student Relationships. *Cyberpsychology, Behavior, and Social Networking*. 2018 May 1;21(5):287-93.
- ²¹ Navarro R, Serna C, Martínez V, Ruiz-Oliva R. The role of Internet use and parental mediation on cyberbullying victimization among Spanish children from rural public schools. *European journal of psychology of education*. 2013 Sep 1;28(3):725-45.
- ²² Pickard JD, Barry CT, Wallace MT, Zeigler-Hill V. Ethnicity, ethnic identity, and adolescent narcissism. *Self and Identity*. 2013 Sep 1;12(5):489-503.
- ²³ Jones DN, Paulhus DL. Introducing the short dark triad (SD3) a brief measure of dark personality traits. *Assessment*. 2014 Feb;21(1):28-41.
- ²⁴ O'meara A, Davies J, Hammond S. The psychometric properties and utility of the Short Sadistic Impulse Scale (SSIS). *Psychological assessment*. 2011 Jun;23(2):523.
- ²⁵ Lee J, Abell N, Holmes JL. Validation of measures of cyberbullying perpetration and victimization in emerging adulthood. *Research on Social Work Practice*. 2017 Jul;27(4):456-67.
- ²⁶ Sumner C, Byers A, Boochever R, Park GJ. Predicting dark triad personality traits from twitter usage and a linguistic analysis of tweets. In *2012 11th International Conference on Machine Learning and Applications* 2012 Dec 12 (Vol. 2, pp. 386-393). IEEE.
- ²⁷ Foulkes L, McCrory EJ, Neumann CS, Viding E. Inverted social reward: Associations between psychopathic traits and self-report and experimental measures of social reward. *PloS one*. 2014 Aug 27;9(8):e106000.

- ²⁸ Barlett CP, Gentile DA, Anderson CA, Suzuki K, Sakamoto A, Yamaoka A, Katsura R. Cross-cultural differences in cyberbullying behavior: A short-term longitudinal study. *Journal of Cross-Cultural Psychology*. 2014 Feb;45(2):300-13.
- ²⁹ Triandis HC. Individualism-collectivism and personality. *Journal of personality*. 2001 Dec;69(6):907-24.
- ³⁰ Smith BM. The measurement of narcissism in Asian, Caucasian, and Hispanic American women. *Psychological Reports*. 1990 Dec;67(3):779-85.
- ³¹ Arafa AE, Elbahrawe RS, Saber NM, Ahmed SS, Abbas AM. Cyber sexual harassment: a cross-sectional survey over female university students in Upper Egypt. *International Journal Of Community Medicine And Public Health*. 2017 Dec 23;5(1):61-5.
- ³² Kowalski RM, Limber SP. Psychological, physical, and academic correlates of cyberbullying and traditional bullying. *Journal of Adolescent Health*. 2013 Jul 1;53(1):S13-20.
- Boyd, C. J., Young, A., Grey, M., & McCabe, S. E. (2009). Adolescents' nonmedical use of prescription medications and other problem behaviors. *Journal of Adolescent Health*, 45, 543–550
- Afek O. The split narcissist: The grandiose self versus the inferior self. *Psychoanalytic Psychology*. 2018 Apr;35(2):231.
- Field T. Cyberbullying: A narrative review. *Journal of addiction therapy and research* 2018; 2:10-27.
- Kircaburun K, Jonason PK, Griffiths MD. The Dark Tetrad traits and problematic social media use: The mediating role of cyberbullying and cyberstalking. *Personality and Individual Differences*. 2018 Dec 1;135:264-9.
- Jessor, R. (1987). Risky driving and adolescent problem behavior: An extension of problem-behavior theory. *Alcohol, Drugs, and Driving*, 3, 1–11. Jessor, R. (1991). Risk behavior in adolescence: A psychosocial framework for understanding and action. *Journal of Adolescent Health*, 12, 597–605.

Kircaburun, K., Demetrovics, Z., & Tosuntaş, Ş. B. (2018). Analyzing the links between problematic social media use, Dark Triad traits, and self-esteem. *International Journal of Mental Health and Addiction*.
<https://doi.org/10.1007/s11469-018-9900-1>

Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction—A review of the psychological literature. *International Journal of Environmental Research and Public Health*, 8, 3528–3552.